

The following listing of claims replaces all prior versions and listings of claims in this application.

Listing of Claims

1. (currently amended) An encoder having an input and an output, wherein the input receives a signal, wherein the encoder calculates an entropy value associated with at least a portion of the signal and encodes the signal to include ~~data representative of the~~ calculated entropy value, and wherein the output carries the encoded signal, which includes the calculated entropy value.
2. (original) The encoder of claim 1 wherein the signal is an audio signal.
3. (currently amended) The encoder of claim 1 wherein the encoder ~~determines~~ calculates the entropy value based on a summation of probabilities.
4. (currently amended) The encoder of claim 1 wherein the ~~data representative of the~~ calculated entropy value is comprised of bits, and wherein each bit is coded by amplitude modulating the signal at a pair of frequencies to preserve an entropy of the encoded portion of the signal.
5. (previously amended) The encoder of claim 1 wherein the signal is encoded to preserve an entropy of the encoded portion of the signal.
6. (currently amended) The encoder of claim 1 wherein ~~the data representative of the~~ entropy value is comprised of bits, and wherein each bit is coded to preserve an entropy of the encoded portion of the signal.
7. (currently amended) The encoder of claim 1 wherein ~~the data representative of the~~ calculated entropy value is comprised of bits, and wherein each bit is coded by swapping a spectral amplitude of at least two frequencies in the signal.

8. (currently amended) The encoder of claim 1 wherein the signal is encoded to include the calculated entropy value using frequency hopping.

9. (currently amended) The encoder of claim 1 wherein the signal is encoded to include the calculated entropy value using spectral modulation.

10. (previously amended) The encoder of claim 1 wherein the entropy value is calculated using histograms.

11. (currently amended) A decoder having an input and an output, wherein the input receives a signal, which includes an entropy value, wherein the decoder decodes the signal to read ~~an~~ the entropy ~~code~~value from the signal, and wherein the output carries a signal based upon the ~~decoded~~ entropy ~~code~~value.

12. (original) The decoder of claim 11 wherein the signal is an audio signal.

13. (currently amended) The encoder of claim 11 wherein the entropy ~~code~~value represents an entropy having a value determined based on a summation of probabilities.

14. (currently amended) The decoder of claim 11 wherein the entropy ~~code~~value is decoded by amplitude demodulating pairs of frequencies.

15. (currently amended) The decoder of claim 11 wherein the entropy ~~code~~value is decoded by determining swapping events, and wherein the swapping events correspond to swapping of a spectral amplitude of at least two frequencies in the signal.

16. (currently amended) The decoder of claim 11 wherein the entropy ~~code~~value is decoded using frequency hopping.

17. (currently amended) The decoder of claim 11 wherein the entropy ~~code~~value is decoded using spectral demodulation.

18. (currently amended) The decoder of claim 11 wherein the decoder is configured to determine an entropy of the signal and compare the determined entropy to ~~an entropy represented by the entropy code value~~.

19. (currently amended) The decoder of claim 18 wherein the decoder is configured to detect at least one of a compression operation and/or a decompression operation based on the comparison.

20. (currently amended) The decoder of claim 18 wherein the decoder is configured to prevent use of a device based ~~based on~~ the comparison.

21. (previously amended) The decoder of claim 18 wherein the decoder is configured to determine the entropy of the signal based on a sum of probabilities.

22. (currently amended) A method of encoding a signal comprising:
calculating an entropy value associated with at least a portion of the signal;
and
encoding the signal to include ~~data representative of~~ the calculated entropy value.

23. (original) The method of claim 22 wherein the signal is an audio signal.

24. (previously amended) The method of claim 22 wherein calculating the entropy value includes calculating the entropy value based on a sum of probabilities.

25. (currently amended) The method of claim 22 wherein the ~~data representative of the~~ entropy value is comprised of bits, and wherein encoding the signal comprises the step of coding each of the bits by amplitude modulating the signal at a pair of frequencies to preserve an entropy of an encoded portion of the signal.

26. (currently amended) The method of claim 22 wherein encoding the signal comprises ~~the step of coding the signal with the data representative of the~~ calculated entropy value to preserve an entropy of an encoded portion of the signal.

27. (currently amended) The method of claim 22 wherein ~~the data representative of the~~ calculated entropy value is comprised of bits, and wherein encoding the signal comprises ~~the step of coding each of the bits to preserve an entropy of an encoded portion of~~ the signal.

28. (currently amended) The method of claim 22 wherein ~~the data representative of the~~ calculated entropy value is comprised of bits, and wherein encoding the signal comprises ~~the step of coding each of the bits by swapping a spectral amplitude of at least two~~ frequencies in the signal.

29. (currently amended) The method of claim 22 wherein encoding the signal comprises ~~the step of coding the signal with the data representative of the~~ calculated entropy value using frequency hopping.

30. (currently amended) The method of claim 22 wherein encoding the signal comprises ~~the step of coding the signal with the data representative of the~~ calculated entropy value using spectral modulation.

31. (currently amended) The method of claim 22 wherein encoding the signal comprises ~~the step of coding the signal with data representative of the~~ calculated entropy value using histograms.

32. (currently amended) A method of decoding a signal, which includes an entropy value, the method comprising:
decoding the signal to read at the calculated entropy code value from the signal;
and
providing an output based upon the calculated entropy code value.
33. (original) The method of claim 32 wherein the signal is an audio signal.
34. (currently amended) The method of claim 32 wherein the calculated entropy code value is based on a sum of probabilities.
35. (currently amended) The method of claim 32 wherein decoding the signal comprises decoding the calculated entropy code value by amplitude demodulating pairs of frequencies.
36. (previously amended) The method of claim 32 wherein decoding the signal comprises determining swapping events that correspond to swapping of a spectral amplitude of at least two frequencies in the signal.
37. (previously amended) The method of claim 32 wherein decoding the signal comprises using frequency hopping.
38. (previously amended) The method of claim 32 wherein decoding the signal comprises using spectral demodulation.

39. (currently amended) The method of claim 32 further comprising:

determining an entropy of the signal; and

comparing the entropy of the signal to the calculated entropy

~~value~~, wherein the output is based on the comparison of the entropy of the signal to the calculated entropy ~~value~~.

40. (previously amended) The method of claim 39 wherein the output prevents playing of the signal.

41. (previously amended) The method of claim 39 wherein the entropy of the signal is calculated based on a sum of probabilities.

42. (canceled)

43. (canceled)

44. (canceled)

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